

Appl. No. 09/990,801  
Amdt. Dated 4/20/2005  
Reply to Office action of 12/13/2004

### **REMARKS/ARGUMENTS**

The Examiner is thanked for the courtesy of a telephonic interview that took place on March 23, 2005. Applicant respectfully submits that the substance of this interview is set forth in the following remarks.

This Amendment is in response to the Office Action mailed December 13, 2004. In the Office Action, the Examiner rejected claims 1-44 under 35 U.S.C. § 102.

Reconsideration in light of the amendments discussed with the Examiner and set forth in this amendment, and the following remarks which set forth the substance of Applicant's arguments to the Examiner made during the interview, is respectfully requested.

Applicant respectfully submits that as discussed with the Examiner, the claim amendments made herein in view of the following remarks should put the present application in condition for allowance.

#### **I. Rejections Under 35 U.S.C. §102**

Claims 1-44 stand rejected under 35 U.S.C. §102(e) as being allegedly anticipated by Naples et al. (hereinafter Naples). Further, claims 1-10, 16-24, and 30-39 stand rejected under 35 U.S.C. §102(e) as being allegedly anticipated by Miller.

As discussed with the Examiner, Applicant respectfully submits that presently amended independent claims 1, 16, and 30 are now patentable over both Naples and Miller because Naples and Miller do not teach or suggest the limitations of Applicants amended independent claims 1, 16, and 30.

As a general matter, as discussed with the Examiner, all of Applicant's amended independent claims 1, 16 and 30 basically related to coupling a stringed musical instrument to a computing device *utilizing an interface device to allow a user to actually play the stringed musical instrument in conjunction with a multimedia presentation.*

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In contrast, both Naples and Miller teach the use of virtual instruments that are not actually played by a user. Accordingly, neither Naples or Miller, alone or in combination, teach or suggest the elements of Applicant's amended independent claims 1, 16, and 30.

More particularly, embodiments of Applicant's invention as set forth in Applicant's amended independent claims 1, 16, and 30, generally relate to coupling a stringed musical instrument to a computing device utilizing an interface device to allow a user to actually play a stringed musical instrument in conjunction with a multimedia presentation in which...an analog audio signal from the stringed musical instrument is generated responsive to a user actually playing the stringed musical instrument, which is converted into a digitized audio signal...the digitized audio signal of the stringed musical instrument as actually played by the user is then transmitted to the computing device to create a processed digital audio signal of the stringed musical instrument...a mixed digital signal of both the processed digital audio signal of the stringed musical instrument and a digital audio file from the computing device is created and converted into a mixed analog audio signal...the digitized audio signal of the stringed musical instrument and the mixed digital signal are controlled such that the mixed analog audio signal is properly timed for transmission through the analog sound device to the user to allow the user to actually play a stringed musical instrument in conjunction with a multimedia presentation of the audio file.

Thus, embodiments of the invention relate to allowing a user to actually play a stringed musical instrument whose original analog audio signal is digitized and processed and combined with a digital audio file to create a mixed digital signal such that a user can actually play a stringed musical instrument in conjunction with a multimedia presentation of an audio file.

In contrast, as discussed with the Examiner, neither Naples or Miller teach or suggest these limitations. Particularly, both Naples and Miller are directed to utilizing input devices to create input stimuli that are utilized by virtual instruments that users can pretend to play. Applicant respectfully submits that Applicant's amended independent claims 1, 16, and 30 that recite a stringed musical instrument that generates an analog audio signal responsive to a user

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*actually playing the stringed musical instrument which is then converted into a digitized audio signal does not read upon Naples or Miller.*

In fact, in paragraph 29 of Naples, Naples details that various types of input devices such as string input device 52 (e.g. an electronic guitar pick for a virtual guitar) and 54 (e.g. and electronic guitar pick for a virtual bass guitar), and a percussion input device 56 (e.g. an electronic drum pad for a virtual drum) that can be used. Applicant respectfully submits that Applicant's independent claims 1, 16, and 30 which relate a stringed musical instrument that generates an analog audio signal responsive to a user actually playing the stringed musical instrument which is then converted into a digitized audio signal does not read upon these input devices.

As discussed with the Examiner, as set forth in paragraph 20 of Naples, if the user chooses to play a virtual instrument a cue track 24 provides some sort of timing indication to a user 16 so that they know when to provide input stimuli to a virtual instrument...The input stimuli can be in many forms such as strumming a virtual guitar pick on a tennis racket, singing lyrics into a microphone, striking a pen onto a drum pad, etc. As further detailed in Naples, in paragraph 36, during the performance of the song selected, a user 16 provides input stimuli to one or more of these virtual instrument input devices 48<sub>1-n</sub>. These input stimuli generate one or more input signals 80<sub>1-n</sub>, each of which corresponds to one of the virtual instrument input devices 48<sub>1-n</sub>, being played by a user 16 (i.e. virtually played by a user) these input signals 80<sub>1-n</sub>, are each provided to the corresponding virtual instruments 50<sub>1-n</sub>...by providing these input stimuli, a user 16 can interact with the performance of a song being played by the interactive karaoke system 10 (emphasis added).

More particularly, as set forth in Naples, in paragraph 21: input stimuli provided to non-vocal virtual instruments (c.g., guitars, basses, and drums) must be processed so that one or more notes, each having a specific pitch, timing and timbre, can be played for each of these input stimuli...A performance track 26 provides the information required to map each one of these input stimuli to a particular note or set of notes. (Emphasis added)

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In contrast as discussed with the Examiner, Applicant's independent claims 1, 16, and 30 relate to a stringed musical instrument that generates an *analog audio signal responsive to a user actually playing the stringed musical instrument*, which is then converted into a digitized audio signal. The analog audio signal of the stringed musical instrument already includes pitch, timing, timbre, etc. as it is itself a signal from a real instrument not an input stimuli. Quite clearly, Naples and the embodiments of Applicant's invention are completely different.

Thus, Naples does not teach or suggest an interface device that *converts an analog audio signal from a stringed musical instrument generated responsive to a user actually playing the stringed musical instrument* into a digitized audio signal and transmits the digitized audio signal to a computing device for digital signal processing and *creating a mixed digital signal of both the processed digital audio signal of the stringed musical instrument actually played by the user and a digital audio file*.

Moreover, Naples does not teach or suggest the further limitations of the digitized audio signal of the stringed musical instrument and the mixed digital signal being controlled such that the mixed analog audio signal is properly timed for transmission through the analog sound device to allow the user to actually play a stringed musical instrument in conjunction with a multimedia presentation of the audio file.

Similar to Naples, Miller, also does not teach or suggest the amended claim limitations of Applicant's independent claims 1, 16, and 30. In fact, Miller, similar to Naples, again deals with providing input stimuli to virtual instruments and does not deal with stringed musical instruments actually played by a user.

As stated in the abstract of Miller, the system described therein allows non-musicians to follow along with a display that is based on the principals of musical notation, but is designed to be intuitive and requires no training to use...the player is guided through the steps of playing a rhythm along with a musical performance, and the system provides the illusion that the player is actually playing a melodic part on an instrument...in addition, the system indicates how closely the player is following a guide and it also scores the players performance. (Emphasis added). Similar to Naples, in Miller, a player utilizes an input device such as an electronic keyboard 22,

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an instrument shaped like a drum 25, an instrument shaped like a wind instrument, etc. to virtually drive a peripheral interface 7 such that the system provides the illusion that the player is actually playing an instrument.

As discussed with the Examiner, this is completely different from Applicant's amended independent claims in which a user actually plays a stringed musical instrument in conjunction with a multimedia presentation of an audio file, and in which, *an analog audio signal from the stringed musical instrument generated responsive to a user actually playing the stringed musical instrument* is converted into a digitized audio signal

As discussed with the Examiner, as particularly set forth in Miller, a player 12 watches a display 6 for visual clues and listens to speakers 11 for audio cues...based on this feedback, the player uses peripherals 10 (i.e. including keyboard 22, instrument shaped like a drum 25, instrument shaped like wind instrument 26) to play a rhythm that corresponds to a musical performance being played by a digital processor...the peripherals 10 provide input to the computing device through a peripheral interface 7...based on player performance information stored on local storage 9 and kept in memory, the computing device uses signal from the peripheral interface 7 to drive the generation of musical tones, the computing device uses signal from the peripheral interface 7 to drive the generation of musical tones by the sound synthesis unit 8 and plays into speakers 11...the player hears these tones, completing the illusion that he or she has directly created these tones by playing on the peripheral 10. (Miller, col. 7, lines 14-29) (Emphasis Added).

Again, Miller, as with Naples does not teach or suggest an interface device that *converts an analog audio signal from the stringed musical instrument generated responsive to a user actually playing the stringed musical instrument* into a digitized audio signal and transmits the digitized audio signal to a computing device for digital signal processing and *creating a mixed digital signal of both the processed digital audio signal of the stringed musical instrument actually played by the user and a digital audio file.*

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Thus, Naples and/or Miller, alone or in combination do not teach or suggest the limitations of amended independent claims 1, 16, and 30. Therefore, amended independent claims 1, 16, and 30 are neither anticipated nor rendered obvious by these references.

Accordingly, as discussed with the Examiner, Applicant's respectfully submit that amended independent claims 1, 16, and 30 are allowable and should be moved to issuance. Moreover, Applicants respectfully request that Applicant's dependent claims, which are dependent from allowable base claims, should likewise be allowed and moved to issuance.

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### Conclusion


In view of the remarks made above, it is respectfully submitted that pending claims 1-44 define the subject invention over the prior art of record. Thus, Applicant respectfully submits that all the pending claims are in condition for allowance, and such action is earnestly solicited at the earliest possible date. The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application. To the extent necessary, a petition for an extension of time under 37 C.F.R. is hereby made. Please charge any shortage in fees in connection with the filing of this paper, including extension of time fees, to Deposit Account 02-2666 and please credit any excess fees to such account.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: 4/20/2005

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### Attachments

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